



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,665	10/03/2003	Thomas Rumpf	RUMPF ET AL-4	9747
7590	10/25/2006		EXAMINER	
Kurt Kelman COLLARD & ROE, P.C. 1077 Northern Boulevard Roslyn, NY 11576			JIMENEZ, MARC QUEMUEL	
			ART UNIT	PAPER NUMBER
				3726

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,665	RUMPF ET AL.	
	Examiner	Art Unit	
	Marc Jimenez	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 October 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-2** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryder (US2187755) in view of DE19852481 (hereinafter ‘481). Note: US6537683 is an English language equivalent and is being relied upon as a translation of ‘481.

Ryder teaches a method of producing a workpiece having at least one bearing eye (for example a connecting rod described on page 2, column 1, lines 32-33), the surface of the bearing eye being coated with an anti-friction coating made of different alloys (page 2, column 2, lines 9-10 and lines 45-47), characterized in that the bearing eye surface is process for a precise fit to a circular cylinder before the anti-friction coating **18,20,22,24** is applied (by electroplating which is considered galvanically plating) to the processed bearing eye surface in a thickness “corresponding” to the final dimensions (on page 2, col. 2, lines 10-30, Ryder describes that the coating can be applied onto “the finished or smooth bearing material receiving surface”. This meets the limitation where the “bearing eye surface is processed for a precise fit to a circular cylinder” because “finished” could be considered “processed” as claimed and a bearing eye of a connecting rod is clearly formed to a “circular cylinder” shape. Alternatively, in figure 4, Ryder

shows that the bearing eye 14 is processed by machining/roughening grooves that can be formed in a spiral, transverse or parallel direction with respect to the axis (page 1, lines 51-55) before applying the coating. The roughening of grooves along the inner surface of the bearing eye essentially forms a “circular cylinder” shape in the bearing eye.). The limitation “processed bearing eye surface corresponding to the final dimensions” is broad enough to encompass merely a preliminary coating step and does not preclude additional steps such as an additional machining step after the coating is applied.

Ryder teaches the invention cited above with the exception of applying a coating made of a harder alloy component and a softer alloy component, wherein the proportion of the softer alloy component in the deposited alloy being increased with increasing coating thickness.

‘481 discloses a method for producing a sliding bearing overlay coating (running surface layer) formed by an electroplating bath (i.e., galvanically plating). The overlay coating includes a harder alloy component and a softer alloy component. By controlling current and/or temperature the composition of the coating varies, such that the harness increases from the surface inward, i.e., the softer component is greater at the surface. The reference discloses the drawbacks with the prior art, requiring alternating layers rather than varying the concentration of hard and soft components (See Col. 1, line 36+).

Regarding claim 1, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have formed the bearing eye of Ryder by applying a coating made of a harder alloy component and a softer alloy component, wherein the proportion of the softer alloy component in the deposited alloy increased with the coating thickness, in light of the

teachings of '481, in order to provide a sliding bearing "which exhibits optimum properties during its entire service life." Col. 1, lines 66-67 of '481.

Regarding claim 2, DE '481 discusses this feature. See Col. 2, lines 18-23.

3. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryder/DE '481 as applied to claims 1 and 2 above, and further in view of Applicant's Admitted Prior Art (AAPA).

Ryder and DE '481 disclose the invention above. However, they do not disclose dividing the bearing eye by a fracture separation. AAPA, as found on page 1 of the Specification, notes that it is known in the art to form connecting rods having bearing eyes by applying a coating, e.g., a thermal spray coating, to a bearing eye either before or after the fracture separation step. Regarding claim 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have fracture separated the bearing eye of Ryder/DE '481, in light of the teachings of AAPA, in order to form a connecting rod.

Response to Arguments

4. Applicant's arguments filed 10-6-06 have been fully considered but they are not persuasive.

5. Applicant argues that Ryder does not teach processing the bearing eye before applying the anti-friction coating, however, Ryder describes that the coating can be applied onto "the finished or smooth bearing material receiving surface". This meets the limitation where the "bearing eye surface is processed for a precise fit to a circular cylinder" because "finished" could be considered "processed" as claimed and a bearing eye of a connecting rod is clearly formed to

a “circular cylinder” shape. Alternatively, in figure 4, Ryder shows that the bearing eye 14 is processed by machining/roughening grooves that can be formed in a spiral, transverse or parallel direction with respect to the axis (page 1, lines 51-55) before applying the coating. The roughening of grooves along the inner surface of the bearing eye essentially forms a “circular cylinder” shape in the bearing eye.).

6. Applicant argues that Ryder teaches additional steps to reduce the coating and that the instant invention avoids additional mechanical operations. However, as currently written the claims do not preclude additional mechanical operations because the claims are written in open-ended format. Furthermore, there is no limitation stating that there is no machining after coating in the claims.

7. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is agreed that Ryder does not teach the proportion of the softer alloy component in the deposited alloy being increased with increasing coating thickness, however, '481 teaches these features.

8. The limitation “the proportion of the softer alloy component in the deposited alloy being increased with increasing coating thickness” is met by addition of more than one layer of the softer alloy component. Both Ryder and '481 teach applying multiple layers.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

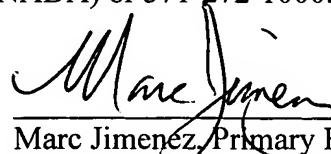
Interviews After Final

10. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Marc Jimenez, Primary Examiner
Art Unit 3726

MJ
10-23-06